

March 13, 2007

RECEIVED

Mr. Chris Hoidal
United States Department of Transportation
Pipeline and Hazardous Materials Safety Administration, Western Region Office
12300 W. Dakota Avenue, Suite 110
Lakewood, CO 80228

Re: CPF No. 5-2007-1003M

Dear Mr. Hoidal,

We are in receipt of the Notice of Amendment (NOA) from the Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA), dated March 5, 2007, to Colorado Interstate Gas Company (CIG). This NOA references an audit conducted by PHMSA in CIG's Pueblo Operating Area in October, 2005. As you know, CIG takes the safety of its pipelines very seriously and we welcome the opportunity to work with you and your staff to improve pipeline safety.

After reviewing your Notice of Amendment letter C<sub>1</sub>G has reviewed our procedures and provides the following responses to the specific allegations made by PHMSA:

## PHMSA Alleged:

§192.605 Procedural manual for operations, maintenance and emergencies.

- (a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response.
- (b) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations.
  - 2) Controlling corrosion in accedance with the operations and maintenance requirements of Subpart I of this part.

## § 192.491 Corrosion control records.

(c) Each operator shall maintain a record of each test, survey or inspection required by this subpart in sufficient detail to demonstrate the adequacy of corrosion control measures or that a corrosive condition does not exist. These records must be retained for at least 5 years, except that records

related to §§192.465(a) and (e) and 192.475(b) must be retained for as long as the pipeline remains in service.

# §192.467 External corrosion control: electrical isolation.

(d) Inspection and electrical tests must be made to assure that electrical isolation is adequate.

Colorado Interstate Gas (CIG) 1) procedures for corrosion control do not require electrical isolation tests at insulators, flanges, or connections. 2) The procedures do not require personnel to retain a record of electrical isolation tests as required by §192.491(c); 3) nor do they provide criteria for when mitigation is required and what mitigation actions are required.

Note: CIG added numbering to the above findings for easier reference

# **CIG Response:**

Procedures for electrical isolation tests are found in the Company's Corrosion Control Manual, Section 200 - General Procedures CORR-002 Electrical Isolation at Flanges/Connections. These procedures were last revised on January 15, 2001 and therefore were in place during the audit. The Corrosion Control Manual identifies specific testing and inspection procedures and is referenced throughout the Company's Operations and Maintenance (O&M) Procedures Manual. The following information is contained within the above referenced section:

#### **CORR-002**

### Scope

Insulating flanges and connections are used to electrically isolate company structures from other structures such as customer's piping or electronic measurement devices, or bare lines from coated lines so Company cathodic protection currents can be applied correctly. Their function is paramount in controlling cathodic protection currents and must be monitored and maintained to ensure their proper operation. The following procedures can be used in conjunction with or in lieu of using a radio frequency (RF) isolation tester.

### **Isolation Testing Procedure**

- Remove any bond wires, arc dissipation devices, and zinc grounding cells from the insulated connection before checking the connection to eliminate parallel current paths.
- 2. Check the voltage difference from Company protected pipe to other pipe by following one of the two methods below:
  - Connect a voltmeter across the insulated flange/connection and read the voltage directly.
  - Read the p/s potential on both sides of the insulated connection with the half-cell in the same position for both readings, and subtract the readings to obtain the voltage difference.
- 3. If the voltage difference is greater than 100 mV, the insulator is effective. If the voltage difference is less than 100 mV, additional testing may be necessary to ensure the effectiveness of the insulator.
- 4. A radio frequency insulator checker may be used to determine the effectiveness of the insulator.

#### Inspection

Visually inspect the flange for potential trouble spots:

- 1. Visually inspect the insulating washers for cracks, missing pieces, or missing washers.
- 2. Check for foreign material between the flanges.
- 3. Visually inspect the bolt insulating tubes for cracks, missing pieces, or missing tubes.
- 4. Visually inspect flanges and bolts for signs of arc burns. Arc burns may indicate ineffective arc dissipation devices, a lightning hazard, or a potential AC hazard.
- 2) Record retention requirements are found in the Company's Operations and Maintenance Procedures Manual, Section 308.1 Corrosion, General and Records. This section was last revised on October 5, 2006 however no substantive changes to the record retention requirements were made at that time and therefore these requirements were in place at the time of the audit.

#### O&M 308.1

#### Records

A set of all corrosion control records shall be sent to Corrosion Control Services and retained for the life of the facility. Each location shall maintain a set of all corrosion control records for the life of the facility. If a full set of records has not been kept for the life of the facility at the location, a set of all present and future records as of January 1, 2001 will be kept at the location for the life of the facility.

- 1. These records must include at least the following information:
  - a. Annual corrosion control surveys,
  - b. Cathodic protection installations,
  - c. Cathodic protection monitoring.
  - d. Internal corrosion monitoring,
  - e. Atmospheric corrosion monitoring,
  - f. Pipe and coating condition at exposures,
  - g. Corrosion leaks, breaks, and/or replacements,
  - h. Design and construction details,
  - i. Location of test leads, isolating devices, bonds, etc.,
  - i. Cathodic protection facilities maintenance, and
  - k. Corrosion history files.
- 3. Procedures which provide criteria for when mitigation is required and what mitigation actions are required are found in the Company's Corrosion Control Manual, Section 200 General Procedures CORR-002 Electrical Isolation at Flanges/Connections,

#### **CORR-002**

# **Troubleshooting**

If a flange is found to be shorted:

1. Perform a visual inspection.

- 2. Trace out all gauge lines, tubing, etc. for a potential electrical path around the isolation flange, and check any in-line isolation devices for proper operation using the radio frequency insulator checker.
- 3. Use the radio frequency insulator checker per manufacturer's instructions to test each bolt for isolation.
- 4. If the cause of the short cannot be located by the aforementioned methods, a faulty insulating gasket may be the cause. To repair, the joint will have to be disassembled.
- 5. After the short is located and repaired, re-inspect to ensure the corrective action was successful.

Again, CIG appreciates the opportunity to work with you and your staff to improve pipeline safety. Please let us know if the above information is not adequate to close your file regarding this inspection.

Sincerely,

Paul Lopez

Supervisor, DOT Compliance Services

Western Pipeline Group

Cc:

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